Four Corners Air Quality Task Force
Oil and Gas / Cumulative Effects Joint Conference Call
January 8, 2007, 9:00 AM

Participants:
Andy Berger, NMED; Leanna Riley, Mike George, NPS; Doug Blewitt, BP; Ray Mohr, Kevin Briggs, CDPHE-APCD; Bill Hocheiser DOE; Lisa Sumi, OGAP; Walt Brown BLM-Durango; Greg Nichols BLM-Denver; Chris Dixon, Citizen; Ran McDonald, Utah DEQ; Mark Jones, NMED; Mike Lazarro, Argonne; Alison Pollack, Amnon Bar Alon, Ron Friesen, Environ; Brady Winkelman, Caterpillar; Pat Cummins, WRAP.

*Unable to participate due to conference call capacity issues: Myke Lane, Williams. Several others were not able to participate due to conference call line capacity.

Purpose
Mike G- purpose of call is to give an overview/update of improvements to EI for Oil and Gas in terms of NM and future WRAP work, and some inventory work from other states that are intending to complete as well.

Presentation:
See Overview of Improvements to Oil and Gas Emissions Inventory by WRAP 1/08/07 Presentation, http://www.nmenv.state.nm.us/aqb/forms/4CAQTF_010807.ppt

Presentation (# corresponds to slide number):

1. Intro: walk through various OG projects that WRAP has completed, culminating in this WRAP inventory to be used in the Task Force Cumulative Effects Modeling.

2. Environ worked with WY to create EM for state, used this to complete Phase I
   -Next was NM EI for two counties
   -Phase II includes producer data to update emissions estimates in Phase I

3. Phase I Project Goal was to include area sources in EI- consistence
   - focus was on NOX, a little VOC
   NM work included more detail in San Juan and Rio Arriba. Phase II improves on existing EI with producer data and improved methodologies.

4. Phase I overview: focus was on NOx sources → drill rig, CBM, and compressor engines
   -Also able to estimate some smaller NOX sources
   -Estimated 2002 emissions, and projected 2018 emissions incorporating federal and state regulations

Walt: Point Source emissions include those with permits? Allison→ yes

5. Phase I included well locations and productions, some info also included drill time from OGCC databases from states.

Cindy B: was data put into [Microsoft] Access database? Allison → used Excel in multiple spreadsheets across states. CA was left as is due to data quality.

6/7. Emission Estimation Methodology for Phase I
   -For drill rigs, WY had some information from drilling activities in Jonah-Pinedale to create
   emission factors (per production→ MMscf)

--Used these EF for emissions estimations adjusted according to depths and durations for
-For Compressor engines, from NM EAC information from producers to create EF for WRAP region in combination with production data

Doug B: any engine size delineations identified or incorporated? Allison → no

** On webpage, report and data available on WRAP website. NM data is also posted there. WRAP Phase II workplan is also available.

-Some data for minor VOC areas sources- dehys, heaters,
-Used different EF and OGC database for emissions estimations

8. Phase I 2018: primary factor for 2018 data was growth in oil and gas activity, Including Resource Management Plans, AK local growth forecasts; default was regional growth factors on slide if no local data.

9. Overview of estimated emissions

Cindy B: area source bar + to four bars to left; point source

10. Phase I emissions

Doug B: gas wells, cond tanks, 2002/2018 estimates… in between were MACT controls applied?

Allison→ almost certain that these are uncontrolled emissions.

11. NM EI (R. Friesen) has detailed producer information on equipment on drill rigs and compressors.

12. Compressor/CBM engines included VOC estimates
    -Well formations and equipment counts included
    -EE showed more emissions from compressor engines, smaller from drill rigs, and greatly increased VOC emissions

13. Phase II Methodology (described in Nov 06 conference call)

14. Phase II Methodology Cont'd
    - Plan to use producer data to improve regional emissions estimates and inventories.
    - Fugitives done based on available resources

Walt: looking at smaller compressor engines? Amnon→ yes, will also attempt to reconcile area and point sources to avoid double counting.

Cindy B: will include fugitives? Amnon→ where capable, otherwise will use Phase I estimates

Walt: how compiling data? Amnon → questionnaire available on WRAP website sent to producers;

Allison → do have commitments from producers, waiting on responses.

Walt; time frame? Allison --All producer data was originally requested by 1/10. EI by end of Feb, mid-March. Do not have all data, will need to recreate timetable. Looking at early April.

Walt: for Point C, speciate VOC emissions by point/formation? Allison→ rely on EPA default profile.

15. Phase II method: Basin-by-Basin (B-B_
    -Where no specific information for a basin, will rely on Phase I emissions

16. Drill Rigs: EF based on manufacturer's rated or producers factor data

- SO2 will apply expected filter content for the fuel used.

17. Compressor Engines:
Doug B: seems will be two classes of equipment: older, more polluting equipment and new, cleaner… how determine what's representative? Amnon→ used basin-wide average. Recognize will be a mix, but trying to determine based on most representative model of engines. Producers indicate this would be typical of operating engines
Walt: get age data from producers? Amnon→ no, would be difficult to obtain that data, and consequently are relying on average data
Walt: what are fugitives as far as VOCs? Ron→ in NM, typical well diagrams Id'g equipment at types of wells. With enough resources, confirm and get equipment counts and estimate emissions from wellhead VOC emissions.

18. VOC emissions: will include new area sources described

19. CBM and Fugitive
Chris: what has been done about estimating emissions from vehicles? Allison→ under federal regulation. Over time, as new vehicles turnover, emissions decreased
Pat C: have mobile source inventory, but would not allow to isolate emissions from any specific sector, but able to identify total emissions based on miles traveled by county by vehicle type.
Chris- EAC work in NM did not address vehicle miles traveled
Pat C: function of Vehicle Miles Traveled (VMT). Should have unpaved road inventory, with same caveats as mobile source inventory.
Walt; used Mobile6 to come up with emissions? Allison→ used EPA approach for road dust and Mobile6

20. Timeline dependant on producer response.
Cindy B- relationship between data quality and emission estimates

23.
Bill: by end of April as well? Allison→ characterizing emission control strategies, end of month. Second part will be to evaluate effect on emissions which is dependent on data available..
Cindy B: include cost benefit in VOC? Allison/Amnon: where appropriate will take into consideration
Lazarro: identify rich v lean burn? Amnon→ estimate will be a range of effectiveness applied to overall inventory.
Kellie: factors for wellhead? Allison→ have not developed factor, awaiting producer data.

28. Goal is to match inventory with throughput, primarily sour gas plants

30. Walt: what is modeling domain? Allison- → should be entire map.

Pat C- big picture comments:
-did Phase I EI, at that time was first ever regional EI for area sources of oil and gas. Motivation came from state air managers to determine extent of air emissions as a problem from oil and gas sources. Because of this nature of the EI and unique nature, raised as many questions as it answered.

-this will continue to be an issue in the West. As with all air quality work, EI will always need better data and will always be under improvement.

-Ultimately, success of project will depend on participation from stakeholders.

Kellie S: have not had request for any other information for 2005 inventory. 2005 data should be more accurate…will improved EI have some sort of graph as to level of accuracy as opposed to using increase of emissions as increase in field compression.

Bill H: plan/process for developing 5 Mitigation Models? Mike→ not sure about yet.

Walt: significance of 2018? Mike→ used for Reg Haze purposes.
Pat C- Regional Haze SIPs must show reasonable progress from 2008-2018.